



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,662	12/21/2001	Mark Stephen Wight	GSH 08-893452	3731

7590

09/04/2003

Hayes, Soloway, Hennessey,  
Grossman & Hage P.C.  
130 W. Cushing Street  
Tucson, AZ 85701

EXAMINER

NGUYEN, TU T

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/036,662

Applicant(s)

WIGHT ET AL.

Examiner

Tu T. Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: .

Detailed Office Action

*Claim Objections*

Claims 1,5,14 are objected to because of the following informalities:

Claim 1, line 4 "wavelength" should be changed to "wavelengths".

Claim 5, line 1, "said step of in-phase modulating" lacks of antecedent and basis. The term "as claimed in claim 3" should be changed to "as claimed in 4" to overcome the objection.

Claim 14, line 3, "transmitter" should be changed to "transmitters".

*Drawings*

Figures 1A, 1B, 1C should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

*Claim Rejections - 35 U.S.C. § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1:

1) line 5, "transmitting same" is not clear. Does Applicant mean "the first and the second wavelengths are transmitted at the same time" or "the first and the second wavelengths are transmitted to the same LUT"?

2) line 10, what is "BER"? Does Applicant mean "Bit Error Rate"? The abbreviation "BER" should be written in unabbreviated format before the abbreviation can be used.

With respect to claim 13, refer to discussion in claim 1 above.

Claims 2-12,14-19 are rejected as being depended on a rejected claim.

### *Claim Rejections - 35 U.S.C. § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6,9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan et al (6,400,869).

With respect to claim 1, Pan discloses a method for measuring a Bit Error Rate (BER hereinafter). The method comprises: generating and modulating 410,420 (fig 4A) an optical

signal of a first and the second wavelengths 112 (fig 2A), delaying the signals 430,440 (fig 4A or column 6, lines 35-55), measuring the BER of the signals (column 6, lines 50-55).

Pan does not disclose obtaining a BER response with a plurality of detuning values. Since Pan discloses a tunable laser source 410 (fig 4A). It would have been obvious to modify Pan's method to measure the BER response based on a plurality of detune values to enhance the testing.

With respect to claim 2, it would have been obvious that the dispersion of a LUT can be calculated from the BER response. It would have been obvious a design choice to modify Pan's method to calculate the dispersion of the LUT to determine different characteristics of the LUT.

With respect to claims 3-6, it would have been obvious a design choice to modify Pan with different changing method or different modulation method or different ratio between the first and the second wavelengths for measuring different type of LUTs or different characteristics of the LUT. The modification involves only routine skill in the art.

With respect to claim 9, determining the sign of dispersion would have been known. It would have been obvious a design choice to modify Pan to determine different characteristics of the LUT. The modification involves only routine skill in the art.

Claims 13-16,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pan et al

(6,400,869) in view of Takeda et al (2002/0003653).

With respect to claim 13, Pan discloses the claimed invention except for a receiver as claimed. Takeda discloses a receiver (fig 10; paragraph [0073]) for measuring the BER base on an electrical signal. It would have been obvious to modify Pan with Takeda's receiver to enhance the measurement. Further, refer to discussion in claim 2 above for measuring the dispersion.

With respect to claim 14, Pan does not disclose a first and a second transmitters. However, it would have been obvious modify Pan with a plurality of transmitters to control the input signals easier.

With respect to claims 15-16, refer to discussion in claim 1 for a plurality of detune values.

With respect to claim 18, the claimed memory would have been known. It would have been obvious to modify Pen with a known memory to store the BER response to increase the calculation speed.

*Allowable Subject Matter*

Claims 7-8,10-12,17,19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the

limitations of the base claim and any intervening claims.

Prior arts of record does not disclose an uncorrelated-pattern regime or determining the sign of dispersion by comparing the dispersion with and without the known module a fit function as claimed in claims 7-8,10-12,17,19.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T Nguyen whose telephone number is (703) 306-9185. The examiner can normally be reached on M-T 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on (703) 308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



**Tu T. Nguyen**  
**Primary Examiner**  
**Group Art Unit 2877**

8/25/03